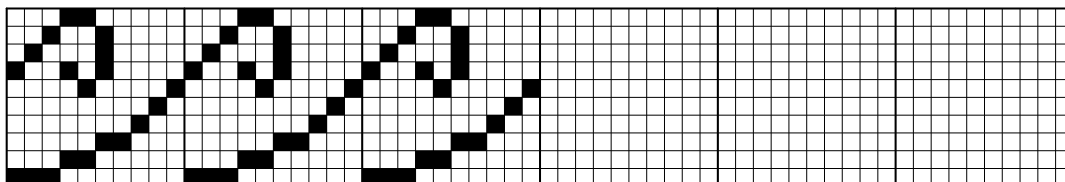


Name: \_\_\_\_\_

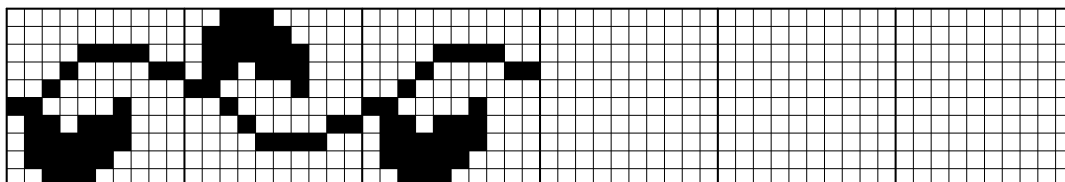
Date: \_\_\_\_\_

There are 7 frieze-pattern groups ([https://en.wikipedia.org/wiki/Frieze\\_group](https://en.wikipedia.org/wiki/Frieze_group)). To generate the patterns, we will need to use translation, reflection, rotation (by  $180^\circ$ ), and glide reflection (a combination of a reflection and translation). Please continue the frieze patterns shown below.

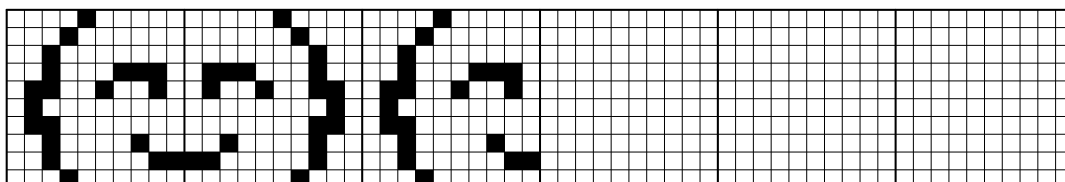
**Hop (p1, translation only)**



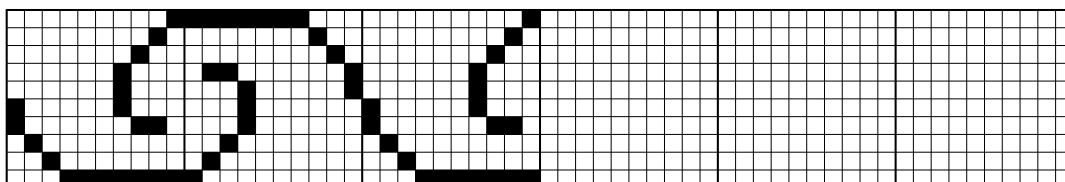
**Step (p11g, glide reflections)**



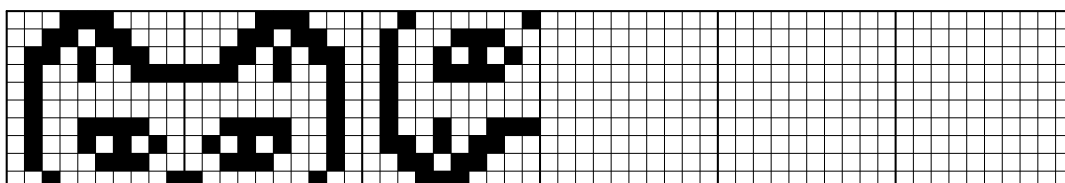
**Sidle (p1m1, reflections)**



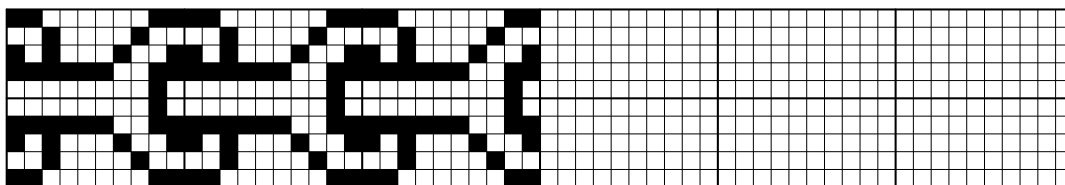
**Spinning hop (p2,  $180^\circ$  rotations)**



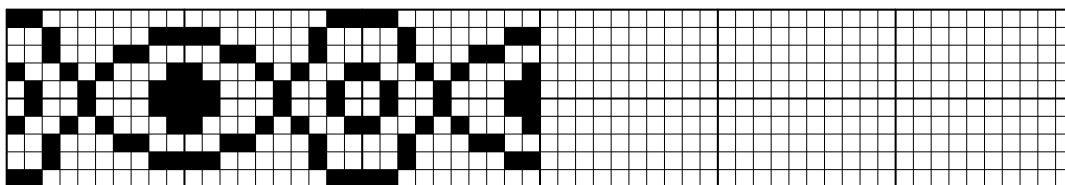
**Spinning sidle (p2mg, reflections and  $180^\circ$  rotations)**



**Jump (p11m, reflection over horizontal axis, translation)**



**Spinning jump (p2mm, reflections over horizontal axis and vertical axes)**

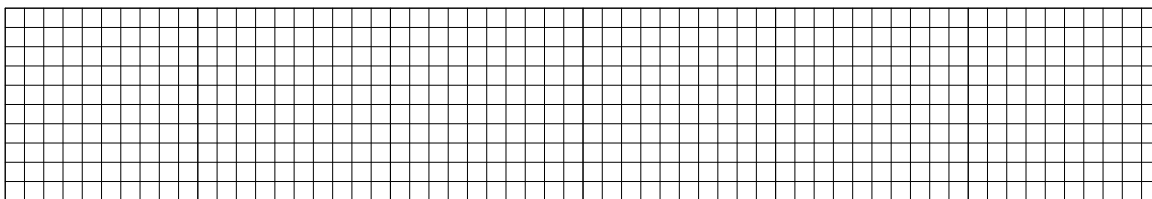


Now, make your own! Choose 3 (different) frieze groups, and make a pattern. You might try this tool:  
<https://chadworley.github.io/frieze/frieze.html>

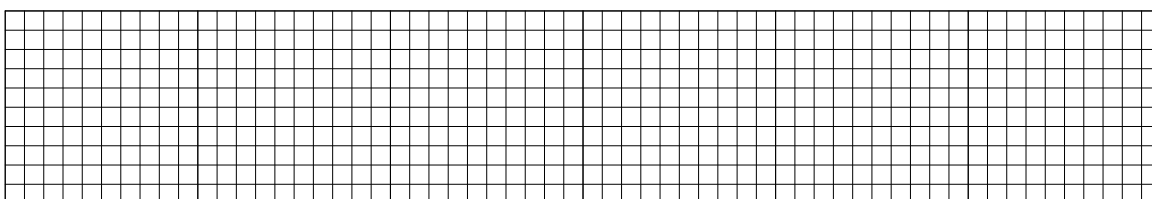
Keep in mind, you do not need to actually fill the “pixels”. You can draw smooth curves; you might find the grid helpful when enforcing the symmetry.

**PLEASE SPECIFY WHICH FRIEZE GROUP YOU ARE USING!**

**Frieze Group:**



**Frieze Group:**



**Frieze Group:**

